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Chair

Mr. James Maloney

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● (0850)

[*English*]

The Chair (Mr. James Maloney (Etobicoke—Lakeshore, Lib.)): Good morning, everybody.

Welcome back. I hope everybody had a good constituency week and a good long weekend.

We only have one witness in the first hour. We were supposed to have Monica Gattinger but she's had some flooding in her basement, apparently, so she's unable to join us today. We do have Theresa McClenaghan.

Ms. McClenaghan, you will be given the floor for 10 minutes to do a presentation, and then I'll open the floor to members around the table to ask questions. You're free to deliver your remarks or answer questions in either official language. Hopefully you have a translation device if you need it.

On that note, the floor is yours. Welcome and thank you for joining us.

Ms. Theresa McClenaghan (Executive Director and Counsel, Canadian Environmental Law Association): Thank you very much.

Thank you, Mr. Chair and members of the committee, for inviting the Canadian Environmental Law Association to speak to you this morning.

The Canadian Environmental Law Association is a 48-year-old national, environmental, non-governmental organization, and also an Ontario legal aid specialty clinic dealing with environmental issues. We provide services to clients as well as undertake law reform and public legal education.

One of our primary lenses in analyzing environmental and energy issues is that of impact on vulnerable and low-income residents. We are also a co-founder and continue to oversee the Low-Income Energy Network, along with the Advocacy Centre for Tenants Ontario. I mention that specifically because my comments today are going to focus primarily on the question of national energy data regarding low-income Canadian residents. I expect this is a perspective that other witnesses wouldn't bring to you, and I felt it's the one of most value for us to offer.

First of all, dealing with national energy data needs regarding low-income energy consumers, we do need more data about low-income energy consumers in Canada to design appropriate policies and programs that are effective and meet the basic energy needs of this sector. There is inequity and inconsistency in how each province and territory deals with their low-income energy consumers and keeps their consumers connected to their utility services if they're in utility areas. For the purpose of analyzing impacts of energy policies on low-income consumers, we need to know their housing tenure and housing type. As well, if they're tenants, policy-makers need to know how many of them pay for their energy directly on their bill and not in their rent. It would also be valuable, and has proven to be in the past, for policy-makers to have demographic profiles of the low-income households facing energy poverty, such as how many are single-parent-led families, racialized, first nations, seniors, disabled, rural, or northern residents. I should add, because I used the term "energy poverty", that the Low-Income Energy Network defines energy poverty as a household spending more than 6% of its income on energy needs.

An example of the type of information that would prove to be very useful would be Canada-wide information emulating the short report —and I presented a link in the remarks that I sent to the clerk. I wasn't able to send them in advance because I have been away for the last two weeks, but I assume you'll get them afterwards. The report was prepared by the Financial Accountability Office of Ontario in 2016, with a bit of a caveat that some of the programs mentioned in that report have since been modified or enhanced. To give you an example of the kinds of things that the Financial Accountability Office looked at, the title of this short report is "Home Energy Spending in Ontario: Regional and Income Distribution Perspectives".

They looked at home energy spending by region and found, not surprisingly that, in the Ontario context, the highest spending was in northern Ontario, and also, perhaps not surprisingly, that for Hamilton, Niagara, and Toronto, fuels other than natural gas and electricity were trivial. But for eastern, northern, and western Ontario, as would be the case in many other parts of Canada, other fuels were a significant portion of the energy costs of the families. That could include heating oil, wood, and other fuels.

They also analyzed home energy spending by income level, and again, this would be useful on a national basis as well. For example, they found that, while low-income households spend a smaller total amount on energy, the percentage of their household income was much higher at an average of 5.9% compared with the highest income quintile they analyzed, where it was only 1.7%. Quite a considerable difference in percentage of household income is going to energy, and that's useful for policy-makers to know, as I'll describe this morning. Then they analyzed what government programs existed at the time to offset the burden of energy costs by region and income level.

Again, that would be very useful to know on a Canadian basis, in order to understand whether different residents in different parts of the country are facing differential burdens and/or have help with those differential burdens.

We also need analysis and evaluation of how well the various energy poverty mitigation programs are doing across the country in addressing energy poverty. This would help to reveal best practices and help jurisdictions to learn from each other, inform federal policy, and understand what needs to change to eliminate inappropriate barriers to energy security.

I also wish to speak to low-income consumers and climate change policy, and highlight in particular the need for national energy data that analyzes and reports on potential differential impacts on low-income consumers of policies directed to the mitigation of, and response to, climate change.

For example, is there a difference in the percentage of income directed to climate change-specific policies for a household, depending on its income profile or other demographic factors? I had noted the finding with respect to energy-related costs by the FAO in Ontario. Similarly, as different climate change programs roll out across the country, this analysis is necessary for those programs. As a result, low-income consumers without alleviating programs may be spending a much higher percentage of their resources on the programs that alleviate climate change or be unable to participate in the programs that alleviate climate change.

A related question would be whether those differential impacts are imperilling access to necessary energy services, or diverting scarce resources in those families from food, shelter, medication, and other basic needs. In the Ontario context, prior to explicit analysis of these factors—which has happened to some degree—these differential impacts had not been widely understood by policy-makers. Having delved into those impacts, we now have specific programs for access to energy conservation by low-income families, better terms of service for the utilities so they aren't as likely to have their services disconnected, and rate support programs, to name a few.

Similarly, it has not been obvious to all policy-makers in Canada that climate policies may have these differential impacts on low-income consumers. As a result, there's been a mixed response in terms of alleviating undue impacts from those climate policies for those consumers.

California is one notable jurisdiction that we point to that's done good work on this to identify those issues and solutions. We've called for emulation of a study it undertook called the SB 350 low-income barriers study. Again, in the written submission I included a footnote to the study. The latest version is a draft staff report from December 2016. It's very useful.

Some of the things they were studying in looking at barriers, for example, included whether there were barriers to accessing energy efficiency and weatherization programs, whether there were barriers to low-income access to solar energy generation, whether small businesses in disadvantaged communities had extra barriers, and whether there were barriers to accessing zero-emission transportation options. They specifically looked at some of the structural barriers—which I would note, based on our work here in Canada, are similar—which are low-income consumers with low home ownership rates, complex needs, difficulties accessing financial arrangements for these kinds of enhanced climate participation, like solar photovoltaic, and insufficient access to capital, as well as the age of the buildings they live in, and living in remote and underserved communities.

In the written submission, I also pointed to a recent submission my organization did on this topic in an Ontario consultation on climate change adaptation. I would repeat some of those recommendations, such as emulating the California study, taking into account the differential impacts on low-income consumers, and the possible inequities from rolling out the programs without paying attention to those differential impacts.

In conclusion, I want to acknowledge the input of my colleague Mary Todorow of the Advocacy Centre for Tenants Ontario, another Ontario specialty clinic here in Toronto, for her input to these remarks.

I thank you for your attention. I look forward to questions and discussion with you this morning.

● (0855)

As I understand that I'm the only witness, I will do my best to answer the questions you have and maybe the hour will be shorter than usual.

● (0900)

The Chair: Thank you and that's entirely possible.

Mr. Whalen, I believe you're going to start us off.

Mr. Nick Whalen (St. John's East, Lib.): Thank you very much for joining us this morning. I guess energy poverty and measuring energy poverty is a slightly different topic than those of the previous witnesses, so thank you for bringing this new perspective to us.

You spoke about the California study and emulating that, and that there's some statistical information that was prepared in Ontario. Can you speak to what you perceive to be some of the challenges associated with collecting this intersectional data, whether or not a national energy information agency would be the appropriate place to collect both the energy data and the other income-specific information or whether or not an agency like StatsCan would be better positioned for those types of cross-correlated datasets?

Ms. Theresa McClenaghan: Absolutely, Statistics Canada is and has been an extremely important venue for collecting that data. What I think the national energy data collection perspective would bring to the table would be the identification of missing data for Stats Canada to collect. More importantly, it would provide specific analysis, evaluation, and collating of that data to look at some of the questions that I identified from an energy-specific perspective.

Therefore, no, I don't think we need to repeat and duplicate what Statistics Canada does already, but at the same time and at the moment, we don't have the good cross-country comparison of energy poverty issues and it really needs a highlight. In addition, since I assume that an energy data organization will be focusing on things like energy costs, climate change, effectiveness, and policies, it's very important to include energy poverty in that analysis, in my opinion.

Mr. Nick Whalen: You spoke about how trying to identify end-user costs would depend on whether their energy use is incorporated into their rent or not and whether they are actually homeowners or not.

In the California study or in the Ontario study, how did they go about getting that deeper data and how would you expect that a national agency should go about trying to get that deeper data?

Ms. Theresa McClenaghan: The Ontario study did refer to available Statistics Canada data, as well as data from the Ontario Energy Board's, for example, so they accessed that kind of data. The California study was interesting because, in addition to the usual statistical venues, they also conducted outreach and quite intensive workshops in a number of identified low-income demographic communities. Then they also convened expert input in round tables to make sure that they were digging deep enough, as compared to what they could assess.

Sometimes it's difficult to be sure that the Statistics Canada data or the national statistics data are reaching all of these varied communities, particularly if we're talking about people whose tenure and homelessness may be impacted by high energy costs, maybe changing addresses quickly could be missed in this type of data collection and other sorts of challenges. This kind of targeted effort seemed to be able to give them some pretty interesting results in California.

Mr. Nick Whalen: I could certainly see how this energy information would help public policy-makers make more informed decisions. Different types of the energy data products that we've been talking about in your study would be required at different frequencies. If you look at the U.S., they provide detailed petroleum information on a weekly basis and they do monthly studies and then they have annual reports. For the energy poverty information, what do you see as a benchmark for studying this particular topic and with what frequency would such a data product be made available to the public?

Ms. Theresa McClenaghan: Due to the very fluid nature of policy-making right now around energy and climate change in particular, I would recommend that it start at a frequency of annual, and then after things have perhaps settled down in the policy world, it could stretch out to every couple of years or so, or line up eventually with the Statistics Canada deep census.

Right now, I'm quite involved in Ontario and we know that things are changing radically from one year to the other, so I would say annual to start.

Mr. Nick Whalen: I have some standard questions that I normally ask, but I think you've captured some of them.

In terms of the standard for this type of data, you mentioned the California model. Would you recommend that to us as the standard by which we evaluate energy poverty?

Ms. Theresa McClenaghan: I would. It's the best one we've been able to find.

● (0905)

Mr. Nick Whalen: In terms of regulatory changes—again, it wasn't a topic I'd turned my head to previously—do you see any regulatory changes that would be required to allow a new energy agency to capture the detailed poverty information of end-users coupled with their energy data usage? Is this something you're confident StatsCan already has the right...? Perhaps you don't know the answer to this question.

Ms. Theresa McClenaghan: I think Stats Canada probably has the ability to get at much of this data, yes.

Mr. Nick Whalen: Okay, perfect.

There are different models for pricing carbon that our government has put forward that the provinces would, hopefully, be able to implement. One suggestion is that the tax be refunded to end-users based on the number of people in the population. It seems to me that would provide a net benefit and a net income transfer to lower-income people, who are spending less money on energy overall, even though it's a greater percentage of their personal income. They would actually receive a greater refund, because they're purchasing less energy.

Does your organization have any view on the different models for carbon pricing and how it could benefit the poor?

Ms. Theresa McClenaghan: In the past we've said to this committee and others, in many other years, that we just wanted government to take action on climate change and take a broad tool kit of regulatory and pricing models. We weren't specifically advocating whether it should be cap and trade, or carbon taxation, or other pricing models on that side of the ledger.

That being said, we do have some concerns in terms of cap and trade—at least as rolling out in Ontario and as part of the western climate initiative—in that the low-income impact is not being sufficiently recognized in that model. But it could be. In California it was recognized with a specific program. In many other jurisdictions it was recognized. There are some programs in the Ontario model that are directed at low-income sectors, such as having some of the funds that are collected be directed to social housing retrofits and so on. The alleviation of the impact itself is not provided for in the model as set up here in Ontario, and we think it should be.

We do think that some kind of specific recognition of the undue impact on low-income consumers, and an offset of that impact, should be provided for in any model going forward.

Mr. Nick Whalen: Thank you so much.

The Chair: Thank you.

Mr. Falk.

Mr. Ted Falk (Provencher, CPC): Thank you, Mr. Chair. Thank you, Ms. McClenaghan, for presenting at committee this morning. It's a pleasure to have you here. Your presentation was very interesting.

I just want to key in on a few things that you've talked about in your presentation here before committee. You said that you've been getting your information primarily from Stats Canada. Are there other sources that provide you with information on energy consumption by low-income folks?

Ms. Theresa McClenaghan: Again, most of our direct work is here in Ontario. The Ontario Energy Board does collect important information on the programs that are being rolled out here. In addition, on broader energy issues the past reports of the National Energy Board and the Ontario Energy Board have been quite important. I know the NEB reports in the past around overall big-picture energy generation have been quite useful. In addition, here in Ontario, of course, the Ministry of Energy is pretty important around things like generation statistics.

Mr. Ted Falk: Thank you.

You indicated that you consider people to be living in the energy poverty sector if their energy expenses are in excess of 6% of their income.

Ms. Theresa McClenaghan: Yes.

Mr. Ted Falk: What kind of energy data is used to compute that figure? You talked about electricity and natural gas, but are other sources of energy also calculated?

Ms. Theresa McClenaghan: That's for electricity and heating, so the household use, not the transportation use, is within this figure. If a family is somewhere in Ontario where they don't have access to natural gas and they have, if not electricity, other fuels for heating, that would be included. It could be fuel oil. It could be wood. Of course, it could be renewable—less commonly, in those families. It's the cost of maintaining their households on the energy side of the ledger.

● (0910)

Mr. Ted Falk: Do you have any data on what their consumption would be from a transportation perspective, or how that would play into it?

Ms. Theresa McClenaghan: No, I don't have that data. That would be an important question. It is something I noticed that the California study did look at when they were looking at access to zero-emission transportation, for example. That's important for sure.

Mr. Ted Falk: I would think so, especially because in northern, rural, and remote communities, I think their percentage of income spent on transportation would probably exceed what an urbanite would typically spend. When you're looking at low-income people, that percentage really becomes disproportionate.

Ms. Theresa McClenaghan: Absolutely, I agree. Often a vehicle is necessary to get to work, for example, and public transit is not available.

Mr. Ted Falk: You also mentioned in your presentation that there were programs intended to alleviate climate change. That's a nice way of saying carbon taxes and I'm sure there are other things. We've been trying to ascertain what the costs for an average family will be with the proposed carbon tax from the current government and we've been unable to do that. We know that it will disproportionately affect low-income folks in the absence of some form of a rebate. Have you done any calculations on what it would cost low-income people?

Ms. Theresa McClenaghan: We haven't done a calculation on the national programs. I don't have the number offhand, but I can get a reference for the committee. We have done submissions as both CELA and the Low-Income Energy Network to the Ontario Energy Board around some of the implications of cap and trade on the natural gas sector, for example. We did specifically single out the necessity to look at the impact on low-income consumers as that program rolls out.

Mr. Ted Falk: Very good.

In your experience dealing with low-income people, when they have an opportunity to make energy choices that would reduce a carbon offset or a carbon footprint that could negatively affect climate change, do you find that people in the low-income bracket are able, or willing, to make those decisions that would reduce their energy consumption?

Ms. Theresa McClenaghan: Yes, we know that there is high willingness. For example, some of our colleagues at other organizations in Toronto were part of some of the tower programs there, looking at educating tenants about the importance of reducing energy not only for their own comfort but for climate change. The willingness to participate was very high.

We want to make sure there aren't barriers to that participation. Because some types of energy sources end up being priced based on the pool of remaining users, if low-income consumers are left out of the climate mitigation side of the ledger, they're using more than they ought to and then they're paying more of the remaining electricity or whatever it is. We need to make sure that there aren't these indirect inequities as well.

Yes, there is high willingness. There's no access to capital without special programs. That's something we've advocated for repeatedly in policy work at the Ontario Energy Board, making sure that as the programs, the latest exciting green widget, become available, there's also access to those programs by low-income consumers.

Mr. Ted Falk: What data would you like to see collected, and by what agency, to better help you make recommendations that would tailor these kinds of things?

Ms. Theresa McClenaghan: As I said, some of the data is collected by Statistics Canada, but if the national energy agency of some type is going to be collecting specific energy data, we would like them to be looking at participation rates by low-income consumers and families in the climate mitigation programs.

We'd like to look at the impact of the climate programs on low-income consumers: whether there are inequities, and whether those are adequately set off by any policy choices, refunds, or otherwise, and make sure that there isn't differential participation, on a kind of percentage of population, by high-income and low-income families in the kinds of measures that reduce energy use and benefit climate.

Mr. Ted Falk: Thank you very much. I think my time has just about lapsed.

The Chair: You have 20 seconds.

Mr. Ted Falk: Thank you for coming to committee.

Ms. Theresa McClenaghan: You're welcome.

The Chair: Mr. Cannings.

Mr. Richard Cannings (South Okanagan—West Kootenay, NDP): Thank you for being here before us.

I just want to expand on the topic of these programs that have been brought in to encourage people to use less energy and some of the unintended consequences around that. In my riding in southern British Columbia, the local electricity provider, Fortis, brought in a two-tier system to encourage people to stay below a certain point, and it adversely affected people who heated their house with electricity. Most people in my area heat their house with natural gas, which is relatively inexpensive, but people in rural areas, who didn't have access to natural gas, and low-income people, who couldn't afford to convert to natural gas, were seeing huge electricity bills.

Now, Fortis has agreed to roll that back over five years. I'm just wondering if you could talk about those unintended consequences. It had another unintended consequence. If we're going to try to reduce our carbon footprint, the obvious thing is to move from natural gas to electricity, and nobody wants to do that in my riding because it costs twice as much to heat your house using electricity. I just wonder if you could comment on that and perhaps tell us if there are other examples across the country that you know of.

● (0915)

Ms. Theresa McClenaghan: First of all, on the question of unintended consequences, that's true in many parts of the country. There was quite a push here too for social housing and many forms of housing to be heated with electricity back in the seventies, for example, when it was perceived that electricity was a very cheap form of power. Again, access to natural gas is very differential. In Ontario, a lot of rural and remote communities do not have access to other fuels and do heat with electricity, so we have seen the same thing here where I live.

As a result, the Low-Income Energy Network has argued for a multi-tiered approach to that. One thing we did argue for here was a specific low-income program dealing with a range of issues like conservation, building retrofits, building envelope retrofits, better access to emergency funds, no charges for disconnection and reconnection for low-income families who get into trouble with their bills, and importantly, quite recently, the Ontario electricity support program. Part of the way that program helps support those families is to take into account whether the family heats with electricity.

In addition, there are some programs dealing with rural and remote because of differential transmission and distribution costs here. I'm not sure if that's true in British Columbia or not, whereas I know that Manitoba, for example, doesn't have differential distribution costs. Those need to be considered as well.

In terms of what we then do, we definitely advocate for renewables as the way forward. If we can have an electricity system that's highly governed by renewable energy, that's one piece of the puzzle, but the price is also an important piece of that puzzle. We have to be looking at how we're pricing electricity and allowing new generation into the mix while keeping an eye on price.

I know, for example, in the work that some of my colleagues here have done, the price of solar is criss-crossing on the curve the price of nuclear this year. We're excited about the fact that the price of some of the renewable technologies is actually decreasing.

We also advocate for a more distributed, less centralized energy system so that we're not paying and losing so much in great big transmission grids and that kind of thing.

In addition, modular systems that allow quicker on and off as generation needs change in the particular province or region of the country are an important piece of keeping that price down. It's a multi-faceted approach, but as we're pursuing these big-picture solutions, we definitely need to be looking at the impact on low-income consumers, and if we need special programs, then we need special programs to help offset that while we fix the bigger picture.

Mr. Richard Cannings: I have one more thing on privacy issues. We've heard about some of the data. We're looking at intersectional data on poverty and energy. Are there any privacy issues in connecting those, having data on family income versus family expenditures and use of energy? Are there any challenges there?

Ms. Theresa McClenaghan: In terms of collecting data in most regions of the province on an aggregated basis, it's not a problem. Once in a while Statistics Canada, as you likely know, will report that a particular population in a particular geographic area is too small to do that without aggregating it with a larger area for privacy reasons, so they have mechanisms to do that.

In terms of the intersectional approach, though, the multi-fuels approach, that's an important piece of the puzzle. What we have found as programs roll out here in Ontario is that families are asked to consent to the necessary sharing of information—and no more than necessary—so that they can get access to the related programs. There seems to be widespread willingness to do that, and then they get access to the conservation retrofit programs and the terms of service programs with the local utilities that help them out a lot. That's done on a consent basis.

There was a little bit of logistical friction around integrating it with the Canada Revenue Agency, but I believe that's being worked out now and being expedited as well, so that it's no longer signing a piece of paper and mailing it in. It can be done online.

● (0920)

Mr. Richard Cannings: Do I have more time?

The Chair: You have 40 seconds.

Mr. Richard Cannings: Just quickly, if you can comment on the British Columbia example of carbon tax and the rebate in Alberta, it's my understanding that 40% or 50% of people in those provinces actually get more money back from the carbon tax than they're spending, because of their low-income status.

Can you comment on that?

Ms. Theresa McClenaghan: Yes. For low-income households in particular, we have pointed to British Columbia, California, some of the other U.S. states, and other jurisdictions like Quebec in our advocacy here when we were trying to persuade our province that it needed a low-income-specific rebate or some way of alleviating the actual financial impact. The hiccup here seemed to be that, the way the program was designed, it was only going to be able to be expended on measures that actually reduce greenhouse gas emissions. We argue that the differential impacts of those programs on low-income consumers should be part of the very programs that are alleviating greenhouse gas emissions and are a justified cost. We agree with that. We also agree that there should be revenue taken from programs like carbon pricing or cap and trade and used to alleviate carbon emissions and housing retrofits that are conservation. We do agree with that, but for the low-income sector we need to also alleviate the differential impact on them.

Mr. Richard Cannings: Thank you very much.

The Chair: Thanks, Mr. Cannings.

Mr. Serré.

[*Translation*]

Mr. Marc Serré (Nickel Belt, Lib.): Mr. Chair, I would like to thank the witnesses for presenting their views on the matter before us.

Like you, other witnesses have said that collecting national energy data is important. There are of course considerable costs involved in collecting that data.

Ms. McClenaghan, you have energy data for Ontario, but do you have data for the other provinces? If a national institute were created, how would the data for one province be submitted to create a national database?

[*English*]

Ms. Theresa McClenaghan: The data we've analyzed the most has been Ontario data in our role as an Ontario legal aid clinic. However, in attending a national energy poverty conference for a few years and working with my colleagues who do reach out to people at Dalhousie and elsewhere, we see there are differences in the data that's collected and analyzed. It was our experience that, until there was actually an intentional focus on energy poverty, the data wasn't being collected and analyzed here either. Time and time again, it's been our experience that energy policy is introduced and even once it's more on the radar it's often forgotten as an issue that needs to be considered, because people might think, well, renewable energy policy isn't about energy poverty, or climate change isn't about energy poverty, or some other aspect. In fact, it's quite important in our experience to always look at energy poverty in every energy policy decision. As noted earlier, some of those consequences are unintended.

In terms of the role of a national institute, we think it's quite important to be doing comparative analysis, learning about best practices, finding out if some of the approaches are more effective than others in alleviating the impacts and whether participation rates are greater in some provinces and territories than others, and then learning from that. We've taken a huge number of lessons from our colleagues in the United States, and one of our consultants who's helped us a great deal has looked at Vermont programs and others, looked at their participation rates, and taken some of their best practices in our advocacy here.

● (0925)

[*Translation*]

Mr. Marc Serré: Thank you.

According to the reports or studies that you have submitted, there are no more smog days in Ontario. Smog has been completely eliminated because Ontario has eliminated coal. In 2013 or 2014—I do not recall the exact year—, there were 54 smog days and now there are none.

In the studies you have conducted, have you looked at the impact of the elimination of smog on the health of low-income residents or the benefits seen in Ontario since 2013 or 2014?

[*English*]

Ms. Theresa McClenaghan: No. That would be a great question to analyze, because the Ontario Medical Association was the leading organization that had analyzed the health effects in Ontario of the coal use and the number of deaths that were happening with those smog days. That's a great question to follow up, about the low-income component of that.

We do know that low-income families, and consumers generally, who have less access to air conditioning often have poor indoor air generally. We do need to watch out as we're working on retrofits and tightening up buildings that we pay attention to things like indoor air quality. This is another issue my organization works on: making sure we're still dealing with radon ventilation and not increasing that source of lung cancer, not increasing tight buildings and having mould as a result, and those kinds of things. These are very intersectional problems.

The City of Toronto, for example, has been working on heat island effects—even since the coal phase-out, we still have hot days here—and working on a bylaw that would ask landlords to make sure units are never more than a certain temperature during the day. Unfortunately, we sometimes do see heat-related deaths from those high-rise buildings.

It's a very intersectional problem and a good one that would be good to ask about the coal phase-out.

Mr. Marc Serré: I believe the Canadian Medical Association said the health system will save about $1 billion because of those changes.

Ms. Theresa McClenaghan: Overall, I would—

Mr. Marc Serré: Like I said, it would be very costly—millions of dollars—to set up a national energy data centre. That's kind of the "Cadillac", or the preferred option. If we were to go to plan B and look at enhancing, for example, Stats Canada—enhancing the department and the collection of data within Stats Canada—what specific recommendations would you have on the approach to enhance the data collection for Stats Canada?

Ms. Theresa McClenaghan: They would basically be the same. I'm not advocating for a new institution for the sake of a new institution. The question that I'm trying to answer is, if there's going to be a new energy collecting institution and analysis organization, it needs to not forget about low-income issues and energy poverty issues. For sure Stats Canada already collects a lot of appropriate information and could be enhanced in terms of a direction to do this kind of cross-country comparison of energy poverty analysis, access to climate change mitigation, and differential impacts on pricing in the different provinces. All of that kind of thing can be done in an objective way to help policy-makers right across the country.

Mr. Marc Serré: If you have any reports, especially on the cap and trade model versus the pricing on pollution, and the model that you would recommend specifying to help low-income families and individuals, could you provide them to the clerk and the committee?

Ms. Theresa McClenaghan: Yes, we'll do that.

The Chair: Thanks, Mr. Serré

Mr. Saroya you have five minutes.

● (0930)

Mr. Bob Saroya (Markham—Unionville, CPC): Thank you, Mr. Chair, and thank you for giving us a perspective from your side —especially from Ontario's side.

Do we have year-over-year data collected on the cost of energy going up versus the income?

Ms. Theresa McClenaghan: I was just looking at the Financial Accountability Office's analysis and that was particular to 2014. I don't know if we've summarized that anywhere. I think that's the kind of thing that could and should be summarized. I'm not totally sure. The Ontario Energy Board might have done a little bit of that here, but I'm not positive.

Mr. Bob Saroya: When we talk about more vulnerable people, those are the people we should be looking after. Do we have any percentage or number for families, people, whose houses have the energy disconnected, or who are in trouble or behind? Do you have any sorts of numbers?

Ms. Theresa McClenaghan: We do now. Unfortunately, I don't have the number off the top of my head. There were some inquiries by media last year and the year before, and the Ontario Energy Board is now collecting and publishing the number of disconnections from different utilities across the province here. I don't know whether that's true elsewhere in the country.

What I do remember, which is probably unfair to say, is that I was quite shocked by the numbers, and they highlighted the necessity to have better programs for terms of service and rate support and better emergency programs. What had been happening before, just to give you a better picture, is that if a family got into financial trouble and received a disconnection notice and was unable to access funds and make it up and their power was disconnected, they were then receiving, in most cases, a disconnection fee from the utility. Then when they had the resources to get their power back on, often with social service agency help and otherwise, they were also paying, in many cases, a reconnection fee.

What's happened here, because of shining a light on this issue, is that some of those fees are no longer being imposed on families who qualify as low-income families. Then there are other programs to make sure the disconnection doesn't happen in the first place, such as better access to equal billing across the year, and other programs to help them with conservation, retrofits, getting insulation into that house if it is a really leaky house, and those kinds of things.

Mr. Bob Saroya: Are most of these vulnerable people renters? Are they tenants? Are they seniors? Do they live on a fixed income? Do we have any stats on whether they are more seniors versus renters?

Ms. Theresa McClenaghan: Definitely more of them are renters, because more low-income families are renters in the first place. In a lot of non-urban areas, definitely a lot of the seniors on fixed incomes will also not necessarily have good insulation in their housing and that kind of thing. I don't think the percentage is higher for seniors, but it's quite significant when it happens because then you have a lot of other health effects coming from the seniors not having a healthy temperature in their homes, and then there are also choices around medication.

In Ontario, again, we have a program now that gives a better electricity credit for families and individuals who are low income and who require medical devices that use electricity or who heat with electricity and these kinds of things. By understanding these demographics better and understanding who is getting into trouble, we're trying to then advocate for the programs that will specifically target and help them the most.

Mr. Bob Saroya: You mentioned in your presentation that the Hamilton, Toronto, Niagara Falls, and Kitchener areas have cheaper energy than do other parts of the province. What are you comparing those with?

Ms. Theresa McClenaghan: No, it wasn't that they were cheaper. It was that they're using electricity and natural gas, and almost no other fuels like heating oil and so on. I was just making the point that when we're looking at energy policy and the data we need for energy policy, we need to take into account that in a lot of non-urban areas people aren't necessarily relying on just their local utility. They're relying on fuel delivery, propane delivery, fuel oil delivery, wood, and those kinds of things, and those are costs to them as well. We have to think about the differences between urban and rural Canada.

● (0935)

Mr. Bob Saroya: Thank you so much.

The Chair: Thank you, Mr. Saroya.

Ms. Ng, go ahead for the last five minutes.

Ms. Mary Ng (Markham—Thornhill, Lib.): Hi there. Thank you so much for joining us today. I have a couple of very, I hope, simple questions. We've covered a lot today.

As we are looking at what a national data strategy would look like, you said that StatsCan already collects a bunch of data, and that the work that needs to be done has an intentional focus so that analysis is done from a low-income point of view. Can you tell us whether or not there are any data indicators that you think are not covered right now? You've said that there are a lot, but could you give us any advice at all about which data indicators might be helpful, that should be collected but aren't now, that will actually help towards that analysis?

Ms. Theresa McClenaghan: Yes. I'm not the best person in our network, and I can get more information to the committee, for sure, from the person who is. The reliance on other fuels is something we should check and make sure data is being adequately collected. I haven't seen any data—probably because the programs are so new—about the differential impact of the climate change policies, so there would need to be some work to analyze what those possible differential impacts are and then collect that data and attribute it to low-income families versus non-low-income families.

I know they do collect things like age of appliance and age of house. Whether they collect information about the state of the housing would be important to double-check. I know that's something that, for example, the utilities here in Ontario had to delve into when they were developing some of the natural gas insulation programs. A lot of the housing was surprisingly poorly insulated. I don't think that was really on people's radar before they actually started going into the houses and trying to work with homeowners to improve their energy efficiency.

It's a question of specifically looking at all the factors that impact low-income energy consumers' use of energy and whether that data is being collected and is being associated on an income level and a demographic level.

Ms. Mary Ng: Are there any jurisdictions that are, first, doing this at all, and second, doing it particularly well? You referenced California, but is there anywhere where there is both the data collection and then that cross-intersection to help understand what the implications are or to help policy-making focused on low-income individuals or families?

Ms. Theresa McClenaghan: When I mentioned California, I said they took a number of different approaches to even address this problem, so even though I have referenced that jurisdiction they didn't think that their normal statistics and data collection would get the answers they needed about the barriers to accessing clean energy and this kind of thing.

The kinds of things I mentioned around structural barriers, access to capital, home ownership rates, and complex needs, it's a question of whether the data is being collected in sufficient detail so that you can do the cross-correlation between the demographic and the factor you're interested in. Yes, we might have overall numbers on home ownership. Have we got good numbers tying that to not only low-income families but also to how that is translating into their energy cost? It's this kind of multi-layered analysis.

Ms. Mary Ng: Thank you for that.

Can you talk to me a little about your network, the Low-Income Energy Network? You're sharing some very helpful information that comes from a set of work that focuses in on this, but what is that capacity across the country? Who are the people who actually would be able to look at the data and then do that kind of cross-analysis so that there are outcomes or recommendations that actually arrive from the analysis of this data? What kind of expertise do we have in Ontario and across the country for the use of the data in that way?

Ms. Theresa McClenaghan: To be honest, we don't have a ton of expertise in Canada in that, although it's improving as different utilities adopt these programs, for sure, and they start to develop in-house capacity. The Low-Income Energy Network has access to an expert named Roger Colton, who has actually been used by a number of utilities both in Canada and the United States as well as by advocacy groups like us. For example, I know he's done work in Nova Scotia, in Manitoba, and elsewhere.

It's because there aren't a lot of people with the capacity to do that analysis. I'm not aware of a huge number of people doing analysis at an academic level either. There was a lawyer named Adrienne Scott who did a master's degree on rural energy costs in Ontario and made her information available to the Low-Income Energy Network, and just spoke at our conference this past month, but that isn't her day job. There's little entrenched capacity, and that's why we think this question of a national institute or a national focus would be quite important to add to that capacity.

In terms of Canadian NGOs, for example, there has been work done by the clinic at Dalhousie University law school in the past. Green Communities Canada has done some work in the past. They were the hosts of the energy poverty conference I mentioned. There is a little bit of work being done by the Assembly of First Nations and Chiefs of Ontario on the indigenous side, but I think it's a very ripe area for more work.

Ms. Mary Ng: Thank you so very much for your testimony today.

Ms. Theresa McClenaghan: You're welcome.

● (0940)

The Chair: Thank you, Ms. McClenaghan.

That's all the time we have this morning, unfortunately. We appreciate your taking the time to join us today and participating in the study.

We will suspend for a few minutes and then come back for our next witness.

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● (0945)

The Chair: We're all set to resume. We are joined in our second hour by Pierre-Olivier Pineau.

Thank you, sir, for taking the time to be with us today.

The process is that you will have the floor for 10 minutes and then we will open it up to questions from members around the table. You may speak in French or in English and anticipate questions in both languages as well. The floor is yours.

Professor Pierre-Olivier Pineau (Professor, Energy Sector Management, HEC Montréal, As an Individual): Thank you very much. I'll do my presentation in English because I think it's easier for the committee.

Thank you for inviting me. It's a pleasure to be here, speaking to you about energy data in Canada.

I'm a professor at HEC Montréal, which is the business school of the University of Montreal. I have been a professor for the last 20 years, and for the last five years I've had this chair in energy sector management, which is one of the few places in Canadian universities, in terms of business schools, to have energy research going on. If you think about business schools across Canada, there are not very often professors with a strong interest in energy economics and energy data and research. I think that's key to the whole discussion here because in Canada we have a lot of natural resources, lots of energy, but we don't study energy from a management perspective very often. I have very few colleagues across Canada who have a strong interest in energy research. There are some but not enough.

I prepared some slides that you will receive later on. The title of my quick notes would be energy data for an energy superpower. We very often present Canada as an energy superpower, which it is when you look at the production numbers. We're also an energy superpower when it comes to consumption because Canadians are the highest energy consumers in the world per capita.

The problem is that we don't measure all that energy very well. We don't know in detail exactly how we use it, and this is, I think, a key issue. Part of my research every year is the publication of a 50-page booklet on the state of energy in Quebec. This research is mostly on Quebec. It gathers all the energy statistics from the production to the transformation to the consumption of energy in Quebec. We have published this booklet for the last five years because there was an almost total absence of accessible energy data in Quebec and in Canada. I'm focusing on Quebec because I cannot cover the whole country, but I believe there isn't any kind of compilation of energy data for every province like the one we're publishing in Quebec. Next year this document will become the official Quebec government document on energy data because they don't publish the state of energy data in the province, which I think is very important because we need to know where we're at in energy consumption, energy production, imports, exports.

Because you have already invited many speakers to your committee you are already aware of these issues. Maybe I will repeat to some extent what you've already heard but hopefully I'll reinforce the need to have better energy statistics across Canada.

The reason we publish this is that it is difficult to access energy data. We use data. We don't generate data. I go to Statistics Canada, Natural Resources Canada, Environment Canada, and other websites to compile energy data to provide them to users. I hear a lot of comments from political parties, industry, researchers across Quebec —mostly Quebec but sometimes across Canada—that this is extremely useful because it is difficult to access energy data.

To summarize there are three problems with energy data in Canada.

First, energy data is not complete. The best example I would provide for this is in the report on energy supply and demand in Canada. In one of the main reports from Statistics Canada on energy, biomass is absent. Biomass is not in the report on energy supply and demand in Canada, according to Statistics Canada's main report. As you know, biomass is extremely important in Canadian energy. It's not as important as oil or electricity but we have a lot of forests, we produce a lot of biomass, it's been used historically across Canada, and it's not there. It's a renewable resource and it's very strange that it's not part of the main statistics.

● (0950)

Incompleteness is the first problem, and I just provided you with one example of a major report on energy data that totally ignores biomass in its statistics.

The second problem is incoherence in energy data. I have another example for you. Again, according to the same report from Statistics Canada, for the last 10 years provinces like Quebec or Ontario have used more natural gas than what was available. Basically, if you read the report from Statistics Canada on energy demand and supply, for the last 10 years, Quebec has used more natural gas than what was accessible in Quebec for the last 10 years. Of course it's not possible to use more than what you have, but if you just read the data, that's what you see. There is no explanation for why this is the case. I did, actually, ask Statistics Canada why that was the case, and they told me in a private email that it's that they have two different surveys that are incoherent. Instead of solving the problem, or instead of just writing a note saying it is incoherent and they are aware of it and are working on solving the issue, they just publish the data and let people figure out how you can use more than what you have. You cannot go to the bank and borrow energy. You need to have the energy, but the way the data is written, it's as if you are using more than what you have.

That's only one instance of incoherence. I could have a long list of issues and problems of incoherence, but I'll spare you because I have only 10 minutes. I already sent three or four pages to Statistics Canada, listing all the problems I've noticed. That was more than a year ago. I have Ph.D. students working on problems and issues. They compiled more problems with the energy data across Canada.

The last problem with energy data, after incompleteness and incoherence, is scatteredness. Energy data is scattered across so many different locations that it becomes a problem to have a single window to access energy data. That was one of the motivations to publish my state of energy in Quebec in one PDF document that contains all the information you can want to have in terms of production, imports, transformation of energy, and consumption of energy in all the different sectors—transportation, buildings, and industry. We do have that and it explains all the statistics—not all but most of the available statistics—from production to consumption that are key for anyone who wants to understand the dynamics in this sector. Energy is important in Canada. We produce a lot of energy. We use a lot of energy, but we don't have the data to manage that energy.

Why is it a problem? It's a problem not to have the correct data for three reasons. There's a lot of debate in Canada. You are, of course, fully aware of all the debate in Canada on how we use energy and all the pipeline debates, but we don't have the data. What are the spillage rates? How reliable are our pipelines? What's better? Where is the source? Where should we go to get that information to settle the debate and try to bring more rationality into the debate? That's the first reason we need stronger and better energy data, to try to have a more rational debate on energy with strong and reliable data, which we don't have at this point. We do have some data, but not to the point where it should be.

The second thing is that we have ambitious environmental objectives. As you know, Canada has the target to reduce greenhouse gases by 30% by 2030, compared with the 2005 initial levels. We have a lot of work in front of us. We need to know where these emissions are coming from. They're coming mostly from the energy sector, so from where in the energy sector are they coming? We need to be able to design programs to understand where we can be better at using energy to reduce our emissions, to save money, and basically, to make Canada richer. Most of the debate on greenhouse gases shouldn't be on the environmental side. It should be on the economics.

● (0955)

We are extremely wasteful in Canada. As I said already, we in Canada are the biggest energy consumers per capita in the world. That means that we are wasting a lot of energy because we're not efficient. There's a good reason for that: we have plenty of energy, it is cheap, we have a large country, and so it's there. We've been using it without thinking about it because it was available.

Times, however, are changing. We have unresolved issues of environmental growth. It costs us money. People complain about the gas prices at the retail pump when they buy gasoline; that's an issue. We need to provide alternatives to citizens, and for that we need strong data. Because we want to be good stewards of our natural resources, we need to optimize the use of natural resources, and if you want to optimize any process, you need the data to understand how to produce, how to transform, and how to use it.

Ultimately, it's about trust in government. If the government wants to have the citizens trust the government, then the government has to show the population that it knows what it should know about: what the natural resources are, what the numbers are, what the costs are, what amount we're consuming. At this point it's extremely hard to have a clear energy picture of the Canadian energy system.

Ultimately, it's about trust in our institutions and trust in government. That is one of the key reasons we need stronger energy data.

I'll be quick in the solutions.

● (1000)

The Chair: You're going to have to be very quick. You could wrap up.

Prof. Pierre-Olivier Pineau: There are many best practices that I could speak more about and international statistics that are provided. Look for the best solutions around the world. There are examples. In my presentation, you'll see what examples I'm using.

With that I'll stop. What we need is to become inspired by the best practices and then work hard and ask people at Statistics Canada to work harder. Give them resources to be able to get their act together and make sure that they provide surveys, which they already provide, but at a better level and a higher quality.

I'm sorry I used all of my time, but I think we have some time for discussion. Thank you very much for listening to my brief comments.

The Chair: Thank you for the presentation.

Mr. Serré, you're going to start us off.

[*Translation*]

Mr. Marc Serré: Thank you, Mr. Chair.

Mr. Pineau, thank you very much for your testimony and for all the work you do.

I would like to get a copy of the three pages you sent to Statistics Canada.

Prof. Pierre-Olivier Pineau: Okay.

Mr. Marc Serré: I would appreciate it if you would send them to the committee clerk.

Prof. Pierre-Olivier Pineau: Perfect.

Mr. Marc Serré: You talked about your efforts to find investments. That is key here. From a political point of view, the opposition will obviously say that, in the past two years, the government has not been able to complete any major projects.

You are referring to statistics that we have not had for decades. So this is not a political issue. The issue does not pertain to the last 30 months; it is a long-standing one.

Do you think there should be a national institute or should funding be provided to the provinces? You are from Quebec and I am Franco-Ontarian, so I am asking this with respect to provincial jurisdiction.

Should there be provincial institutions working with Statistics Canada, for instance, or a national institute working with you?

Prof. Pierre-Olivier Pineau: Thank you for your question.

I think there are a number of possibilities. I do not have a clear-cut opinion on how to proceed, but I think centralizing information is extremely important in order to have consistent data.

Above all, I think it is vital to have national standards and a federal institution to make sure we have statistics for Canada and for all the provinces so we can have energy data for each province. The first thing to do, I would say, is for the federal government to set national standards that the provinces would follow.

Could certain aspects be decentralized? Absolutely, but I do not think that is necessary. The National Energy Board is based in Calgary, and there is no problem with that. A statistics office could be based in Toronto, Ontario, or in the Maritimes. The key is having detailed, national coverage of the various issues, something we do not currently have.

Mr. Marc Serré: Okay, thank you.

Like a number of other witnesses, you talked earlier about data collection in relation to data analysis. There is a lot of data, but not much analysis, it would appear.

As an academic, do you have any specific recommendations to make? Even if we created a national institute or research centre, if the data was not analyzed by a university, something would be missing.

What are your thoughts on the analysis of the data?

Prof. Pierre-Olivier Pineau: I completely agree with you.

As I said in my introduction, I am from a business school where very few of my colleagues are interested in the energy sector. This can be attributed to the fact that we have always invested a great deal of money in engineering research. A lot of attention is given to how oil is extracted from the tar sands and on how to improve electrical processes. A lot of money is invested in research on technical aspects, which is very important, except that we have reached a point where we have a lot of technical knowledge, but insufficient management knowledge. That means that management practices are not sufficiently developed.

Universities should actually do much more research and analysis. Statistics Canada could also do more analysis and research.

In the presentation I submitted to the clerk that you will receive today, I mentioned Statistics Norway, the equivalent to Statistics Canada. It is Norway's statistical research agency. In addition to gathering statistics, the agency's researchers and analysts use that data to conduct research and inform the government, the investment community, and users on energy use, production, and processing in Norway.

That is done within the Norwegian government. Norway is very similar to Canada in that it produces a lot of oil, hydroelectric power, and biomass. Its climate is also comparable to ours. The country would be a good source of inspiration for us. It has a population of 4 million and the government conducts more research on the energy economy than the Canadian government does.

● (1005)

Mr. Marc Serré: Mr. Chair, how much time do I have left?

[*English*]

The Chair: You have one minute.

[*Translation*]

Mr. Marc Serré: I will give the last minute of my time to my colleague, but first, I have one last question for you, Mr. Pineau.

You talked about energy waste. Do you have any information to share with the committee about that? As you said, Canada is one of the biggest energy consumers in the world. You said something about waste that interests me.

Prof. Pierre-Olivier Pineau: Canada consumes a lot of energy, primarily in transportation. On the whole, our vehicles are larger than we need and, overall, the energy efficiency standards for those vehicles are not extremely stringent.

The same is true of buildings, although there is improvement in this area. The energy efficiency of buildings is improving, but houses are getting bigger and bigger. In short, energy efficiency is higher per square foot, but our houses have more square feet. As a result, our energy consumption is rising steadily whereas, technically, we have the means to reduce consumption.

Our transportation systems consume a great deal of energy, as compared to best practices around the world. There could be less congestion and greater mobility for Canadian society, and at a lower cost.

Mr. Marc Serré: Thank you.

Mr. Fragiskatos, you have the floor.

[*English*]

Mr. Peter Fragiskatos (London North Centre, Lib.): Professor, you talked about the fact that energy data in Canada is scattered. To what extent is that the result of the fact that Canada is a federation? Does federalism play into this at all?

Prof. Pierre-Olivier Pineau: No.

Mr. Peter Fragiskatos: Do the unitary states have an easier time in terms of generating a centralized base for data?

Prof. Pierre-Olivier Pineau: No. I don't think that's a strong explanation, because within the federal government energy data is scattered across Statistics Canada, Natural Resources Canada, and the NEB. They have a hard time coordinating themselves and collaborating to share data.

I'm not saying that they don't share, but they don't send you easily from one place to the other. It seems that their efforts are really separated, and that has nothing to do with the fact that we are a federation. These are three institutions that decentralize amongst themselves. One of the examples—

Mr. Peter Fragiskatos: Yes, and they're not speaking to each other.

Prof. Pierre-Olivier Pineau: Yes, they don't speak enough. They don't have a vision of what the energy data should be. With regard to electricity, in particular, it's a problem. That might be related to the fact that all electricity systems are provincially based, and then they basically operate in silos. Of course, they trade on the margin, but every province is operating its energy system within its own province as a silo.

If you look at, for example, Europe, there are many countries—27 countries—and they have a website. That's an example that I gave in my presentation, which you'll receive this afternoon. They have one website where you can have access to every European country. On an hourly basis, you can have the hourly consumption in France, Germany, Italy, etc. You go to one website, and you can have the production data—the hourly production data—for every country, and consumption data, and how much wind is produced in Denmark now, how much wind is produced in Spain now. They've been able to gather their data together—27 countries. We're 10 provinces, and we're not able to do that. I think it's a shame.

Electricity is extremely important to operate. We want the market to be active.

● (1010)

The Chair: I'm going to have to stop you there, Professor. Thank you.

Mr. Falk.

Mr. Ted Falk: Thank you, Mr. Chair.

Thank you, Dr. Pineau, for your testimony here at committee. Your passion is very evident. Your enthusiasm for the work you're doing is almost contagious, so thank you very much. It's refreshing to see people engaged in their work and passionate about it.

You published an article in "Policy Options" last year. In it you argue that the lack of shared data in eastern Canada is costly to the consumer, and that it also makes the possibility of large-scale projects very difficult. Can you expand on that a little bit? Is that just an eastern Canada phenomenon, or is that...?

Prof. Pierre-Olivier Pineau: No. As I was just saying in my examples for electricity, all our provinces are working in silos. Quebec is planning for Quebec. Ontario is planning for Ontario. New Brunswick is planning for New Brunswick. Of course, when you look only at one province, you don't have the economies of scale that you could have if you were planning for more provinces and if you were looking at, more generally, what happens.

Look at what Alberta is doing right now. Alberta wants to introduce a lot of wind into its electricity sector. It wants to displace coal, have natural gas, and invest in a lot of wind. At the same time, B.C. is struggling with its Site C hydro project. At no point have there been discussions or joint planning to see if Site C for hydro development in B.C. could be useful for wind penetration in Alberta. Wind and hydro are complements because when the wind doesn't blow, you can use hydro. That's just an illustration of how maybe Site C is not justified on a purely B.C. basis. If it were planned jointly with Alberta, then wind in Alberta would make more sense because it wouldn't fluctuate as much, but could be balanced with the hydro in B.C. Has Alberta gone to B.C. to do joint planning? Very little.

It's the same thing with Manitoba and Saskatchewan. They could and they should have joint planning for their hydro systems, but they have two separate hydro systems. Again, all across Canada there's a lack of joint planning that is actually extremely harmful because we have projects that are not optimal, and ultimately, consumers will pay more for these projects.

Mr. Ted Falk: You identified in your presentation also that the energy potential from biomass was excluded in data. Are there other sources of energy that you've identified that are not included, but perhaps should be?

Prof. Pierre-Olivier Pineau: Yes. There are many of the new, small, renewable energy sources, like geothermal energy. How many houses in Canada are heated through geothermal energy? We don't know. In Switzerland, they would actually collect that data, so that's another example, another best practice. Statistics Canada should look at what Switzerland is doing. How many PV panels are there on the roofs in Switzerland? They know that. Do we know in Canada? No, we don't. With regard to geothermal energy, how many wells have been drilled to get geothermal energy in Canada? Again, we don't know that. Biomass and most of these new and smaller, but potentially important, renewable sources are not very well studied.

Mr. Ted Falk: Another avenue I'd like to pursue a little bit, from your comments, is this. You said that we should shift our focus a little more away from environmental concerns and more to economic concerns. Without putting words into your mouth, I would like you to explain a little more about the benefit of doing that.

Prof. Pierre-Olivier Pineau: I strongly believe we should work against climate change and we should reduce our emissions, but people think it's first an environmental issue. However, as far as I am concerned, and the numbers I've seen in terms of congestion and Canadians going into debt to buy their new vehicles.... We currently have low interest rates, but people keep buying bigger vehicles and getting into more debt for them. When interest rates rise, they will be trapped with their big vehicles, which use more gasoline than the smaller vehicles they could have purchased that would have cost less.

Ultimately, right now Canadians are investing a lot of money in vehicles that are not used very often, because one vehicle is used one hour a day, on average. Basically you buy a $35,000 SUV and it stays idle for 23 hours every day. That's not a good business investment. You don't go hunting or go moving your grandma every week, so basically the pickup truck you have is not used optimally most of the time.

The F-150 is the most sold vehicle across Canada, and we're not using it as.... It's just oversized for the needs of most Canadians. I'm not saying that some Canadians don't need these pickup trucks. I'm just saying that most buyers don't need them. Some do; some don't. We're investing a lot of money in these trucks that are ultimately burning more gasoline than needed just for the transportation needs, and that's creating congestion. It's also creating infrastructure costs, because we always want more roads and bridges. That's costing Canadians a lot.

In terms of economics, it's a bad investment, and in terms of the environment, of course it's not good for the environment, so I think the focus should shift towards how much our transportation system costs us. It costs us a lot for providing us with a lot of congestion, which is not very productive from an economic perspective.

● (1015)

Mr. Ted Falk: I think I follow what you're saying. Just to summarize, you're saying that by focusing more on the economic side of energy, we would actually achieve our environmental goals as well.

Prof. Pierre-Olivier Pineau: Yes.

Mr. Ted Falk: We're starting from the wrong perspective is what you're suggesting.

Prof. Pierre-Olivier Pineau: I think so. Yes.

Mr. Ted Falk: I have one quick question I would like to get in. You talked about Stats Canada. You've had lots of interaction with them. You work with them closely. You gather data. You talked about some of the inconsistencies in, or the incoherence of their data.

In your opinion, can Stats Canada be fixed to the point where it would accomplish what you would envision a national data energy supplier should?

Prof. Pierre-Olivier Pineau: I have to say I'm not an internal expert on how Statistics Canada is organized and the internal problems they may have. Without knowing these internal problems and the possible fights they may have internally, I think, yes, they can definitely fix the problems. If they get the resources and put their priorities on doing that and they are rewarded for doing a better job, I really think there's no reason why they couldn't. I think, yes, Statistics Canada could do that, but they may have internal problems that are difficult to solve, although I'm not aware of those internal problems.

Mr. Ted Falk: Good.

Thanks, Dr. Pineau.

The Chair: Mr. Cannings.

Mr. Richard Cannings: Thank you, Professor Pineau.

You were rushed at the end of your presentation when you were going to talk about what we should be doing and some best practices we could look for, and I'm just offering you an opportunity to expand on that, whether we should look to the EIA in the United States or to Europe. You mentioned Norway and Switzerland. Could you spend some time talking about what we should be doing?

Prof. Pierre-Olivier Pineau: There are many things we should be doing. I think the single agency or one agency having a higher standard is definitely what we should do.

This morning in the U.S.... It's not the EIA. I love the EIA. That's the website I go to maybe three or four times a week to get data, but the U.S. Department of Transportation just released the 2017 national household travel survey. Basically, every few years they do a survey on how Americans are travelling in their cars, in their vehicles. That's key because almost 80% of the oil we're using is in transportation. The majority of the oil we're using in transportation is for households, for our individual vehicles.

If we want to solve our energy issues, we need to understand how it's used. Oil is mostly used in transportation. This morning they released a survey and they provided all the data. They have 130,000 households in their sample. This morning, by going to the American website, as a researcher I could download a dataset containing 130,000 lines with information on the number of cars these households have in the U.S., how many miles they travel in a year, the type of car, their income. This is what we call "microdata". It's microdata at the household level. I could click on their website and download the dataset and start some analyses, or ask a student to do it.

If you go to Statistics Canada and you want to have access to the microdata, it's hell. Two years ago I actually went and asked for microdata to have my students work on real Canadian data, because I thought it was time to have students working on Canadian data and not always using the U.S. data because the U.S. data is available. I had to go through a lot of paperwork, sign a confidentiality agreement, and then they sent me a CD-ROM with the data, which was less interesting than the U.S. equivalent. In the end we did use the Canadian data in my class, but it's not user friendly. There are a lot of barriers. For the American data, you go on the website and you download the dataset. For Statistics Canada, you have to write them an email. They send you a letter. You have to read the contract, sign the contract, resend the contract, and then they send you the DVD or the CD-ROM with the data.

This was not secret. Everything was anonymized so I could not track back to the household with their good house and how much energy they were using. There were no confidentiality issues, no anonymity issues. It was just lots of paperwork. So the access to data is problematic, and then it's not the data you would wish for. Access to data that you actually don't really like, which is the best you can get, is difficult. Of course, there's a lot of better data.

There are European websites. I've already mentioned this electricity website where you can have all the hourly consumption and production from all sources, from all European countries. Switzerland produces a yearly energy book, similar to the one I publish for Quebec, but much more detailed, and they publish it themselves. It's the energy statistics institution in Switzerland. Switzerland is a federation so they have lots of, not provinces, but what they call cantons. They are smaller, so they do have to compile data from different kinds of provinces in Switzerland. They do provide excellent data on the type of biomass that they use to heat buildings. Is it logs or other types of pellets? For PV, for geothermal energy and, of course, for oil, gasoline, and natural gas, they have extremely detailed data accessible. Again, Switzerland is a country with eight million people. In Canada we have more than 30 million people and we should have better quality data.

There are many examples. By no means do I pretend this to be exhaustive, but there are lots of good practices we could draw on to get better data, especially if we claim to be an energy superpower. We do produce a lot of energy, but we're not a superpower in terms of energy data.

● (1020)

Mr. Richard Cannings: I wondered if you might want to continue in that vein on energy efficiency. I've heard at energy meetings that efficiency is the best new fuel and you seem to have a lot of passion for that subject. Perhaps you could let us know what kind of data we're missing in Canada around energy efficiency that would be helpful for us to meet our target.

Prof. Pierre-Olivier Pineau: We don't have a good picture of the cost of our energy transportation system, the transportation system, or mobility across Canada. We don't have a good grasp on how much it costs us as a country to build the roads, to maintain the roads, to buy the cars, and to maintain cars and SUVs on the roads.

With regard to our heavy trucks compared with rail, rail uses one-tenth the energy of heavy trucks. Canada has not invested in new railroads for the last 50 years. CN and CP are just maintaining their railroads. We don't invest in new railroads. Our priority infrastructure project should be to connect Canada for freight because heavy truck transportation is expensive. It's destroying roads because heavy trucks are heavy. This is what costs us a lot in terms of roads. They take space, and many of these heavy trucks go across Canada.

We don't have a good picture of how heavy trucks could be substituted by rail and what the overall cost to society would be. So far, CN and CP are not interested in building new railroads because they see their businesses as extremely operational. They operate their railways extremely well, but they don't think in terms of investment. If we want to reduce greenhouse gases by 30% in 2030, now is the time to ask how we will transport freight in 12 years. We will need to have fewer trucks.

We talk about electric trucks and hydrogen trucks. These are fine and we'll need them, but you cannot electrify all these heavy trucks easily. It will cost a lot, so you will need more railways. We've built Canada on railways. We should build a 21st-century Canada on railways. That will not exclude the individual vehicles or trucks; it will be a complement. If we look at the growth of freight traffic in Canada, it's heavy trucks that have taken the majority of the growth, at the cost of more congestion and more road damage. These heavy trucks are the vehicles that are destroying roads and creating the issues. More data on freight transportation and on cost would help us a lot.

Building efficiency is a key area. There should be more information on how we're using energy in buildings and on what is the energy saving potential we could achieve.

● (1025)

The Chair: Thank you.

Ms. Ng.

Ms. Mary Ng: Professor Pineau, thank you so much for sharing your information. I'm looking forward to reading your slide deck on the proposed solutions.

You talked about the three issues that inhibit us from getting good data, which were incompleteness, incoherence, and scatteredness.

Can you tell us about the incomplete data? Is it because of the way in which it is being compiled right now that it's incomplete, or is it the case that there actually is incompleteness and, therefore, we are not collecting the information that we should be?

About incoherence, do you have recommendations about how to make the data more coherent and more accessible? In terms of the scatteredness, I think we already talked about StatsCan having a greater role or the potential for a central mechanism that actually allows for the data to be collected, analyzed, and used.

Maybe you could talk to me about recommendations around incoherence. How do you make it more coherent?

Prof. Pierre-Olivier Pineau: Thank you for your question.

Regarding incompleteness, I think in terms of biomass and new renewable options, we don't go as aggressively as we should to collect the data, especially on biomass. There are a lot of different types of biomass. It's complex. It's wood but it's waste. It's agricultural waste. There are different types of biomass, but all of that biomass could be used and better valorized to create energy products that are renewable and that could be used.

This is important because we don't go and collect the data. Part of it is that there is not a big market, so of course, there is not a lot of money to be made. Industry is not pushing for that because nobody really cares. It's a farmer from whom you buy some logs to heat your cottage. That's a small market. The problem is that, if we want to move towards our environmental goals, we'll need to do the most from our renewable resources. If you want to manage, you need to be able to have the data and be able to monitor what we're using.

Incompleteness is really based on the fact that because we were blessed with so much oil and natural gas, and because it's cheap, we've overlooked what we also have in great quantities, which is even cheaper. We just leave it on the floor in forests.

Ms. Mary Ng: We just finished doing a study on secondary wood products and there certainly are a number, whether it's industry associations or industries themselves, that are actually in this business. They may not be gathering data or maybe they are. At this point, I think that it might be fair to say that it isn't being collected, perhaps as part of the dataset at Statistics Canada, nationally, or through national or even provincial organizations. You're saying that there's an opportunity there to do so.

Prof. Pierre-Olivier Pineau: Yes, we should collect. It is sometimes collected by the firms. They will know what they're using and what they're leaving, but we don't collect that. If you want to start a new product, for instance, if you want to produce wood pellets, what would be your resource you can access and the transportation costs? With biomass and wood products, the big problem is cost because it's produced somewhere and you need to relocate the resource where it's useful. There are costs.

If we had access to more trains, transportation would be easier. It's all the data to—basically, we need to know the system and, at this point, we don't know the whole system. It's incomplete. There are holes in what we know and what we don't know. That's for the first part.

Regarding incoherence, I just think that it's that too few people pay attention to these issues. They don't call Statistics Canada and complain. I did complain. I will send you the three or four pages of problems I listed to Greg Peterson, who you actually received as a witness a few weeks ago. Greg Peterson is a great person. He thanked me for providing him with the list of issues.

We may have been the only ones who have really complained about this. We need more users to complain and I'm glad you have this committee and you are raising this issue because I think it's key for the future of Canada to have a better energy dataset. If it's incoherent, it's because someone didn't double-check things and didn't connect the dots. If you have two numbers that don't match, you need someone to work it out and find a solution as to why the data isn't the same. Someone has to scratch his head and find ways to have coherent data.

● (1030)

Ms. Mary Ng: Thank you.

I think my time is up.

The Chair: You have two minutes.

Ms. Mary Ng: That's good.

I think that there is an opportunity for the committee to look at best practices and where this actually might be done well elsewhere. You certainly talked about Sweden and Switzerland. We did hear from the EIA a couple of weeks ago. That's great.

This is your field of research. You spend a lot of time on this and your students do as well. What advice would you give the committee, as we're looking at what a national data strategy would be, around looking at those systems that are good already? What could we do because we may have an opportunity, at this juncture, to have a data system that could be world leading?

Prof. Pierre-Olivier Pineau: I think the key issue is to have a long-term commitment. It cannot be just a two-year fix where the government says, "Okay, we'll give you $10 million or $15 million to fix the problem", and it will be fixed. It has to be a long-term commitment in energy data structure, so that when the investment's made we know it's for good and it's not political. It's not because it's the Liberals or the Conservatives or the NDP that want the data. We need to make sure it's there for good and we have strong institutions and independent statistics. It is there for everyone and is rigorous about the way it collects data.

You need users. You need the data, and you need the users. Again, we need to make sure that the government is actually funding research, and not only technical research, because there's a lot of data for innovation in new techniques for energy. There is very little funding for energy research in terms of how we use it, energy economics, and that's a funding priority. I think there should be users everywhere across Canada, and again, with a strong commitment from the government to fund that research not on a yearly basis but on a long-term basis. Of course, it's required by the government to use the output of the research, to be informed, and to inform its policies with the research. Otherwise, if governments make decisions that are not based on research and evidence, then of course.... Sometimes it may be good for political reasons, because you have a good pitch to make, but for the confidence in the system, confidence in the data, confidence in government, trust in government, we need to have a population that actually trusts the government to make the best decision based on the best analysis of the best data.

It's a whole stream of issues. It's not the energy data. It's also the users. We need an energy data user community that is strong, and as I said, I'm one of the few in business schools who are doing this, looking at energy economies. You received David Layzell from Calgary, but there aren't many professors doing energy economics and looking at how we manage energy issues across Canada, and that's a shame when we are such a big energy superpower.

Ms. Mary Ng: Thank you, Professor.

The Chair: Thanks, Ms. Ng.

Mr. Falk tells me they don't have any more questions, so that would take us back over here if anybody has questions. We have 10 minutes left.

Nick, you can have five minutes.

Mr. Nick Whalen: Earlier in your remarks, Professor, you mentioned that the amount of natural gas that was available to be sold was less than the amount that was declared to have been purchased. I'm wondering if you could speak a bit about how this works. Is this like pump fraud, or...? What types of efficiencies can be gained by having an independent data analysis to reconcile these types of poor-quality data?

● (1035)

Prof. Pierre-Olivier Pineau: When I mentioned the problem to Statistics Canada, they said, "Yes, of course there are these discrepancies in data. It's because we have two surveys: one on production and deliveries, and one on consumption, and these two surveys don't match." That was the answer. Basically, there's a survey looking at how much is used, and it shows a higher number than the survey that says how much natural gas is delivered into the system. Nobody seemed to care or to say, "This cannot be the case. There must be a problem somewhere, so someone should do an investigation and look into what is wrong in our survey." There are two surveys, so that one survey, the consumption survey, shows a higher number than the production survey and the delivery survey.

Obviously nobody—well, maybe someone is now, but the problem is still there in the latest statistics because before bringing this issue to you I checked last week to see if it was still the case. It is still the case for the last year, 2016, that Quebec and other provinces are using more natural gas than they receive. It's not a question of storage or stocks. That's all taken into account. It's really that what's available to consumers is lower than what is claimed to be used. It's just that Statistics Canada accepts having these inconsistencies in their data, and they don't push further. Maybe they don't have the resources. Maybe the staff don't care. Maybe users don't complain. Maybe it's a mixture of all that, but the data is not serious. It's not serious in terms of data.

How can we solve the problem? I'm not a statistician. I'm not collecting data myself. I did collect data a few times in my research, but if you still have time, you should probably invite some people not from the EIA but from the IEA—the International Energy Agency.

Mr. Nick Whalen: They've been here as well.

Prof. Pierre-Olivier Pineau: They have strong energy statisticians who ask how data should be collected, how you reconcile that, because it's complex. It is a lot of data, lots of sources, and you need to make sense of all that.

Obviously, there's not enough work put into the data in the Canadian energy statistics. I don't know exactly where we should put resources, but we definitely should have.

Mr. Nick Whalen: If I have time for one more short question, I have a presentation that I believe is yours in front of me. It is "Certainty: A National Energy Data Resource". Is this the name? It's dated May 8.

Prof. Pierre-Olivier Pineau: No, it's not mine.

The Chair: Okay, I'm sorry. There's some material in front of me that I thought might have been the presentation that we're about to receive—I had some questions on it—but it's not.

I look forward to receiving your presentation in due course, and maybe I'll provide written questions at that time.

Thank you very much.

Prof. Pierre-Olivier Pineau: Thank you very much.

The Chair: Thanks, Mr. Whalen.

Mr. Cannings, if you have nothing to follow up with, I think we're probably done.

Professor, thank you very much for joining us this morning. It was very helpful, very interesting. We're grateful for your taking the time.

Prof. Pierre-Olivier Pineau: Thank you for the invitation.

The Chair: That's all for today.

We will see everybody on Thursday. The meeting is adjourned.

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